Access DB# 97945

SEARCH REQUEST FORM

Scientific and Technical Inf rmation Center

Requester's Full Name: Reyas Patel Examiner # : 78264 Date: 5/5/11/08

Art Unit: 1625 Phone Number 30 405-1153 Serial Number: 10/070 365

Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

3D01 - 3A16

If more than one search is submitted, please prioritize searches in order of need.

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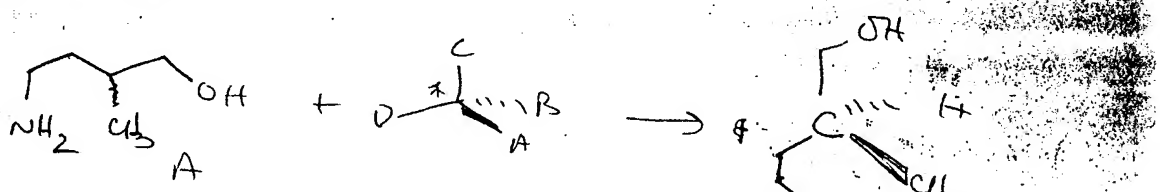
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: See Copy of Biblio

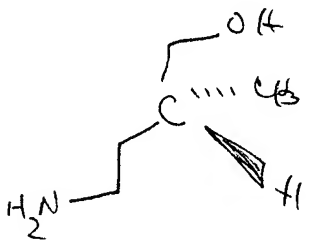
Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**



Enantiomeric Resolution of A using any possible optical agent and specially those disclose in claims.



POINT OF CONTACT:
PAUL SCHULWITZ
TECHNICAL INFO. SPECIALIST
CM1 6B06 TEL. (703) 305-1954

Thanks

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#)_____	STN 324.47
Searcher Phone #: _____	AA Sequence (#)_____	Dialog _____
Searcher Location: _____	Structure (#) 2	Questel/Orbit _____
Date Searcher Picked Up: 5/2	Bibliographic _____	Dr.Link _____
Date Completed: 5/2	Litigation _____	Lexis/Nexis _____
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Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: 12	Other _____	Other (specify) _____

PTO-1590 (8-01)

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L1              STR

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H2N-~-CH2-CH2-CH-~-CH2-OH
  1   2   3   4   5   6

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
L3        52640 SEA FILE=REGISTRY ABB=ON  PLU=ON  NC=1 AND C=5 NOT RSD/FA
L4            4 SEA FILE=REGISTRY SUB=L3 SSS FUL L1
L5           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4(L)PREP/RL
L6           16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4(L)(RACT OR RCT OR RGT)/RL
L7            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND L6
L8            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND (STEREO? OR ENANT? OR
                OPTICAL?)
L9            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 OR L8

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L9   ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:298987  HCAPLUS
TITLE:                    Preparation and purification of optically
                          active 4-amino-2-methylbutan-1-ol and its sulfonic
                          acid salts
INVENTOR(S):              Sakano, Kunihiko
PATENT ASSIGNEE(S):       Mitsubishi Rayon Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 6 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     JP 2003113146      A2   20030418      JP 2001-307708   20011003
PRIORITY APPLN. INFO.:                   JP 2001-307708   20011003
AB   Optically active 4-amino-2-methylbutan-1-ol is prepd. by
     recrystn. of RSO3- +NH3CH2CH2CHMeCH2OH [R = C1-20 (un)substituted alkyl,
     alkoxy, acyloxy, (un)substituted amino, Ph, naphthyl] and treatment with
     alkalies in solvents.  (S)-4-amino-2-methylbutan-1-ol was treated with
     MeSO3H in acetonitrile at 60.degree. and recrystd. to give a salt with
     95%e.e.
IC   ICM  C07C213-10
     ICS  C07C215-08
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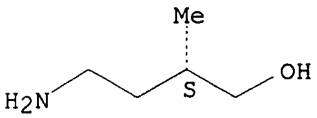
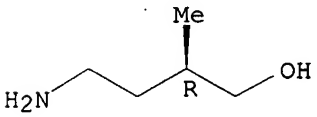
CC 23-7 (Aliphatic Compounds)
IT INDEXING IN PROGRESS
IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol **88390-32-3P**
RL: PUR (Purification or recovery); **RCT (Reactant)**; **PREP (Preparation)**; **RACT (Reactant or reagent)**
(purifn. of **optically** active aminomethylbutanol by reaction with sulfonic acids and recrystn.)
IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol **88390-32-3P**
RL: PUR (Purification or recovery); **RCT (Reactant)**; **PREP (Preparation)**; **RACT (Reactant or reagent)**
(purifn. of **optically** active aminomethylbutanol by reaction with sulfonic acids and recrystn.)
RN 44565-28-8 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

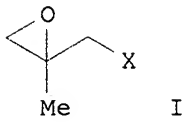
Absolute stereochemistry.



L9 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:196444 HCAPLUS
DOCUMENT NUMBER: 138:221235
TITLE: Preparation of **optically** active 3-methyl-4-hydroxybutylamines
INVENTOR(S): Watanabe, Hisayuki; Kawamura, Yasuo; Hashiba, Isao
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003073344	A2	20030312	JP 2001-262569	20010831

PRIORITY APPLN. INFO.: JP 2001-262569 20010831
OTHER SOURCE(S): MARPAT 138:221235
GI



AB **Optically** active OH-protected 3-methyl-4-hydroxybutylamines are prepd. by reaction of oxiranes I [X = halo, halo-(un)substituted C1-4 alkylsulfonyloxy, arylsulfonyloxy] with metal cyanides, asym. hydrogenation of 3-cyano-2-methyl-2-propenol, redn. of **optically** active 2-methyl-3-hydroxybutyronitrile, and protection of OH group of **optically** active 3-methyl-4-hydroxy butylamine. The compds. are useful as intermediate for (9R)-7-[3,5-bis(trifluoromethyl)benzyl]-6,7,8,9,10,11-hexahydro-5-(4-hydroxymethylphenyl)-9-methyl-6,13-dioxo-13H-[1,4]-diazocino[2,1-g][1,7]naphthyridine (no data). 2-Chloromethyl-2-methyloxirane was reacted with NaCN in H2O at room temp. overnight, which was hydrogenated in MeOH in the presence of [Rh(nbd)(S,S)-tert-Bu-BisP*]BF4 under 0.7 MPa H for 3 days, and reduced with LiAlH4 at room temp. for 1 h to give (R)-3-methyl-4-hydroxybutylamine, which was reacted with 3,4-dihydropyran in the presence of HCl in THF at room temp. for 5 h to give 80% (R)-3-methyl-4-(2-tetrahydropyranyloxy)butylamine.

IC ICM C07C213-02
ICS C07B053-00; C07C215-08; C07C253-30; C07C255-12; C07C255-14; C07D309-12; C07B061-00; C07M007-00

CC 23-7 (Aliphatic Compounds)
Section cross-reference(s): 28

IT 98-88-4, Benzoyl chloride 110-87-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(for protecting group; prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)

IT **88390-32-3P**
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(in protection; prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)

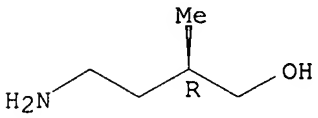
IT 52900-11-5P 217189-83-8P 501108-20-9P, 3-Benzoyloxy-2-methyl-1-cyano-1-propene
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)

IT 183551-55-5P 258265-78-0P, (S)-3-Methyl-4-benzyloxybutyronitrile
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)

IT 207606-22-2P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)

IT 598-09-4, 2-Chloromethyl-2-methyloxirane
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)
IT **88390-32-3P**
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(in protection; prepn. of **optically** active methylhydroxybutylamines by reaction of methyloxirane with metal cyanides, hydrogenation, and redn.)
RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



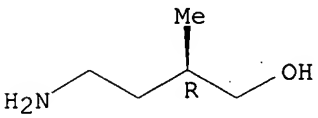
L9 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:886132 HCAPLUS
DOCUMENT NUMBER: 137:384569
TITLE: Purification of (2R)-4-amino-2-methylbutan-1-ol
INVENTOR(S): Nohira, Hiroyuki; Watanabe, Hisayuki; Shiratori, Motohito; Seki, Kenichi; Kawamura, Yasuo; Hashiba, Isao
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002332263	A2	20021122	JP 2001-137458	20010508

PRIORITY APPLN. INFO.: JP 2001-137458 20010508
AB The compd. (I) is purified by crystn. of I terephthalic acid salt and treatment of the resulting salts with bases. I was treated with terephthalic acid in EtOH at 80.degree., left overnight, and treated with NaOH in H2O to give I with 99.1% purity.
IC ICM C07C209-88
ICS C07C215-08; C07B057-00; C07M007-00
CC 23-7 (Aliphatic Compounds)
ST aminomethylbutanol **optical** resoln terephthalic acid
IT **88390-32-3P**
RL: PUR (Purification or recovery); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(purifn. of 4-amino-2-methylbutan-1-ol)
IT **88390-32-3P**

RL: PUR (Purification or recovery); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(purifn. of 4-amino-2-methylbutan-1-ol)
RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



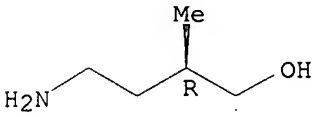
L9 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:807297 HCAPLUS
DOCUMENT NUMBER: 137:325150
TITLE: Preparation of **optically** active 3-substituted 4-hydroxybutylamines
INVENTOR(S): Watanabe, Hisayuki; Kamisaka, Hiroyuki; Oda, Takashi; Seki, Kenichi; Kawamura, Yasuo
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002308838	A2	20021023	JP 2001-299919	20010928

PRIORITY APPLN. INFO.: JP 2001-31655 A 20010208
OTHER SOURCE(S): MARPAT 137:325150
AB **Optically** active H2NCH2CH2CHR1CH2OR4 [I; R1 = C1-6 (cyclo)alkyl, C2-6 (cyclo)alkenyl, C2-6 (cyclo)alkynyl, Ph, benzyl; R4 = protective group], useful as intermediates for a dysuria treating agent, etc., are prepd. by redn. of **optically** active NCCH2CHR1CO2R2 (II; R1 = same as I; R2 = H, alkali metal, alk. earth metal, any group given for R1) and OH protection. (R)-II (R1 = Me, R2 = Et) (prepn. given) was reduced by LiAlH4 in THF at 0.degree. for 1 h and treated with aq. NaOH to give 84% (R)-I (R1 = Me, R4 = H), which was treated with 3,4-dihydropyran in THF in the presence of HCl at 0.degree. for 5 h to give 80% (R)-I (R1 = Me, R2 = 2-tetrahydropyranyl).
IC ICM C07C213-02
ICS C07C215-08; C07C253-30; C07C255-19; C07C255-22; C07D309-12; A61K031-4375; A61P013-02; C07B053-00; C07B061-00; C07D487-04; C07M007-00
CC 23-19 (Aliphatic Compounds)
ST hydroxybutylamine **optically** active prepn cyanopropionate redn
IT **88390-32-3P** 110171-23-8P 167778-98-5P 217189-83-8P 454685-94-0P 454685-96-2P 454685-97-3P 473445-13-5P 473445-14-6P
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**

(prepn. of **optically** active hydroxybutylamines)
IT 183551-55-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **optically** active hydroxybutylamines)
IT 105-34-0, Methyl cyanoacetate 1116-98-9, tert-Butyl cyanoacetate 13361-32-5, Allyl cyanoacetate 42411-39-2 74497-15-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **optically** active hydroxybutylamines)
IT **88390-32-3P**
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of **optically** active hydroxybutylamines)
RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:205059 HCAPLUS
DOCUMENT NUMBER: 136:247347
TITLE: Recovery of **optically** active organic acid in preparation of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resolution
INVENTOR(S): Yamaguchi, Yasumasa; Hamanaka, Koji; Inaba, Hideyuki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002080434	A2	20020319	JP 2000-268506	20000905

PRIORITY APPLN. INFO.: JP 2000-268506 20000905
OTHER SOURCE(S): MARPAT 136:247347
AB (R)- or (S)-4-amino-2-methylbutan-1-ol [(R)- or (S)-I] is prepd. by contacting a soln. contg. (R)- or (S)-I and **optically** active org. acid, with alkali for salt decompn. and filtering. (R)- or (S)-I is recovered from the filtrate and the resulting solid org. acid salt is collected by the solid-liq. sepn. The collected salt is contacted with acid in solvent and crystd. to recover the **optically** active org. acid. Thus, (RS)-I was treated with (R)-2-chloromandelic acid (II) in EtOH under heating, crystd., and filtered to give a soln. contg. (R)-I, (S)-I, and II, which was treated with EtONa and filtered to give II salt and filtrate. The collected salt was dissolved in hot water, treated with

70% H2SO4, and cooled to recover 87% II. The filtrate was distd. to give (S)-I with 61% e.e. with 88% recovery.

IC ICM C07C213-10
ICS C07C215-08; C07B057-00; C07M007-00

CC 23-7 (Aliphatic Compounds)

ST **optically** active chloromandelic acid recovery aminomethylbutanol resoln

IT Carboxylic acids, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chiral; recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT Sulfonic acids, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**optically** active; recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT Resolution (separation)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT Alkali metal hydroxides
RL: RCT (Reactant); RACT (Reactant or reagent)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT Metal alkoxides
RL: RCT (Reactant); RACT (Reactant or reagent)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT 52950-18-2P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

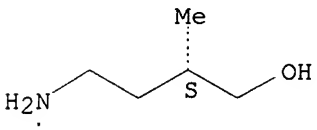
IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropyl alcohol, uses 71-36-3, Butanol, uses 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT 124-41-4, Sodium methylate 141-52-6, Sodium ethylate 1310-73-2, Sodium

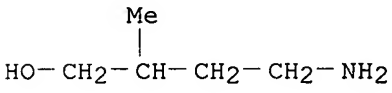
hydroxide, reactions **44565-27-7**, 4-Amino-2-methylbutan-1-ol
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)

IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)
RN 44565-28-8 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **44565-27-7**, 4-Amino-2-methylbutan-1-ol
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(recovery of **optically** active org. acid in prepn. of **optically** active 4-amino-2-methylbutan-1-ol by **optical** resoln.)
RN 44565-27-7 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl- (6CI, 9CI) (CA INDEX NAME)



L9 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:205034 HCAPLUS
DOCUMENT NUMBER: 136:247346
TITLE: Recovery of **optically** active organic acids and **optically** active amines in **optical** resolution
INVENTOR(S): Yamaguchi, Yasumasa; Hamanaka, Koji; Shibuya, Nozomu
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002080407	A2	20020319	JP 2000-268507	20000905

PRIORITY APPLN. INFO.: JP 2000-268507 20000905
OTHER SOURCE(S): MARPAT 136:247346

AB Alc. solns. contg. title compds. are contacted by alkali carbonate and the pptd. **optically** active org. acid alkali salt crystals are sepd. by solid-liq. sepn. to recovery the **optically** active acids and amines. Thus, EtOH soln. contg. (R)-2-chloromandelic acid (I) and racemic 4-amino-2-methylbutan-1-ol was cooled, filtered, the filtrate refluxed with Na2CO3 for 10 h, cooled, and filtered to give I salt and filtrate. The salt was dissolved in hot water, treated with HCl, and cooled to recover 87% I. The filtrate was distd. to give (S)-4-amino-2-methylbutan-1-ol with 61% e.e. with 88% recovery.

IC ICM C07B063-00
ICS C07C051-43; C07C059-56; C07C213-10; C07C215-08; C07B057-00; C07M007-00

CC 23-7 (Aliphatic Compounds)
Section cross-reference(s): 21

ST **optically** active chloromandelic acid recovery aminomethylbutanol resoln; alkali carbonate **optically** active acid amine recovery; alc solvent **optical** resoln recovery; sodium carbonate **optically** active chloromandelic acid ethanol

IT Carboxylic acids, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chiral; recovery of **optically** active org. acids and amines in **optical** resoln.)

IT Sulfonic acids, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**optically** active; recovery of **optically** active org. acids and amines in **optical** resoln.)

IT Resolution (separation)
(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT Carbonates, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol **88390-32-3P**, (R)-4-Amino-2-methylbutan-1-ol
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT 52950-18-2P 328086-85-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(recovery of **optically** active org. acids and amines in **optical** resoln.)

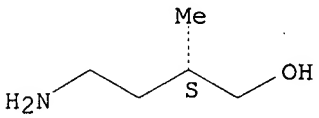
IT 497-19-8, Sodium carbonate, reactions **44565-27-7**, 4-Amino-2-methylbutan-1-ol
RL: **RCT (Reactant); RACT (Reactant or reagent)**

(recovery of **optically** active org. acids and amines in **optical** resoln.)

IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol **88390-32-3P**, (R)-4-Amino-2-methylbutan-1-ol
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(recovery of **optically** active org. acids and amines in **optical** resoln.)

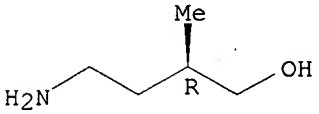
RN 44565-28-8 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



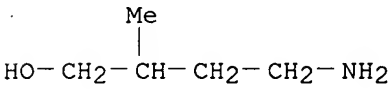
RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **44565-27-7**, 4-Amino-2-methylbutan-1-ol
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(recovery of **optically** active org. acids and amines in **optical** resoln.)

RN 44565-27-7 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl- (6CI, 9CI) (CA INDEX NAME)



L9 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:185708 HCAPLUS
DOCUMENT NUMBER: 134:193127
TITLE: Process for producing **optically** active aminoalcohol
INVENTOR(S): Ozaki, Eiji; Endou, Takakazu; Yamaguchi, Yasumasa; Hamanaka, Mitsuharu
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001017944	A1	20010315	WO 2000-JP6092	20000907
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1219593	A1	20020703	EP 2000-956999	20000907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				

PRIORITY APPLN. INFO.: JP 1999-252902 A 19990907
JP 2000-205074 A 20000706
WO 2000-JP6092 W 20000907

OTHER SOURCE(S): MARPAT 134:193127

AB Described is an industrially advantageous process for inexpensively producing **optically** active high-purity 4-amino-2-methylbutan-1-ol which is useful as an intermediate in synthesizing **optically** active medicines and pesticides. Racemic 4-amino-2-methylbutan-1-ol is treated with an **optically** active org. acid. The diastereomeric salt thus formed is crystd. out and subjected to solid-liq. sepn. to give **optically** active 4-amino-2-methylbutan-1-ol. This diastereomeric salt of **optically** active 4-amino-2-methylbutan-1-ol with an **optically** resolving agent is desalted by bringing into contact with a solvent and an alkali and subjecting to solid-liq. sepn., thereby recovering the **optically** active 4-amino-2-methylbutan-1-ol from the filtrate. Further, the filtration residue contg. the alkali salt of the **optical** resolving agent obtained by the solid-liq. sepn. is brought into contact with a solvent and an acid. Then the **optical** resolving agent thus crystd. out is subjected to solid-liq. sepn. and recovered. Thus, 110 g racemic 4-amino-2-methylbutan-1-ol (I) was added dropwise to a soln. of 200 g (R)-2-chloromandelic acid (II) in 1,100 mL isopropanol, heated to dissoln., cooled to room temp., treated with 100 mg (R)-I.II salt seed crystals, and further cooled slowly to 5.degree.. The pptd. crystals were sepd. by filtration and rinsed with cold isopropanol to give 173 g (R)-I.II salt (63 %e.e.) which was recrystd. from 1,100 mL isopropanol to give 102 g (R)-I.II salt (99.9 %e.e.). The latter diastereomer salt (100 g) was dissolved in 415 g MeOH upon warming, treated dropwise with 28% NaOMe/MeOH (80 g), cooled to 5.degree., subjected to solid-liq. sepn. The sepd. liq. was concd. and vacuum-distd. to give 15 g (R)-I (99.9 %e.e.). The sepd. solid was dissolved in 80 g water upon heating, treated with 7 g concd. H2SO4, cooled to 5.degree., and subjected to solid-liq. sepn. to recover 22 g II.

IC ICM C07C213-10
ICS C07C215-08; C07B057-00

CC 23-7 (Aliphatic Compounds)

ST **optically** active aminoalc prepn; aminomethylbutanol **optical** resoln mandelic acid

IT Alcohols, preparation
RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
(amino; prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT Carboxylic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(chiral; prepn. of **optically** active aminoalc. by

optical resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT Sulfonic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**optically** active; prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT Resolution (separation)
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 71-23-8, n-Propanol, uses 75-05-8, Acetonitrile, uses 108-20-3, Isopropyl ether 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(crystn. solvent; prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT **88390-32-3P**, (R)-4-Amino-2-methylbutan-1-ol
RL: PUR (Purification or recovery); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol
RL: PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT 98-88-4, Benzoyl chloride 124-41-4, Sodium methoxide 611-71-2, (R)-Mandelic acid 1310-73-2, Sodium hydroxide, reactions 2743-38-6, (-)-Dibenzoyl-L-tartaric acid 3144-16-9, (+)-10-Camphorsulfonic acid 17916-88-0, N-Acetyl-D-valine 20312-36-1, (S)-(-)-3-Phenyllactic acid 32189-36-9, (R)-4-Chloromandelic acid **44565-27-7**, 4-Amino-2-methylbutan-1-ol 52950-18-2, (R)-2-Chloromandelic acid 52950-19-3, (S)-2-Chloromandelic acid 77977-73-2, (R)-4-Nitromandelic acid
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT 328086-85-7P 328086-87-9P 328086-88-0P 328086-89-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

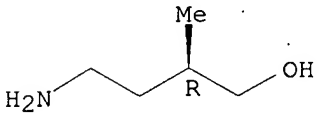
IT 328086-86-8P 328086-90-4P 328086-91-5P 328086-92-6P 328086-93-7P 328086-94-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

IT **88390-32-3P**, (R)-4-Amino-2-methylbutan-1-ol

RL: PUR (Purification or recovery); **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

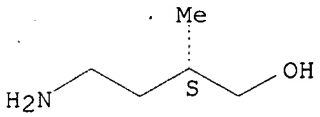
Absolute stereochemistry.



IT **44565-28-8P**, (S)-4-Amino-2-methylbutan-1-ol
RL: PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

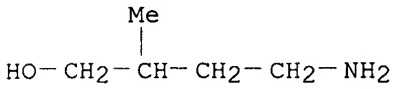
RN 44565-28-8 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **44565-27-7**, 4-Amino-2-methylbutan-1-ol
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(prepn. of **optically** active aminoalc. by **optical** resoln. involving preferential crystn. of diastereomer salts with **optically** active acids and salt decompn.)

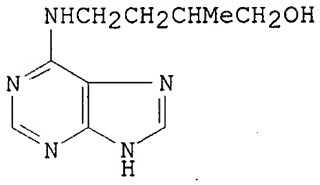
RN 44565-27-7 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl- (6CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:34316 HCAPLUS
DOCUMENT NUMBER: 100:34316
TITLE: Dihydrozeatin: an improved synthesis and resolution of both isomers
AUTHOR(S): Corse, J.; Gaffield, W.; Lundin, R. E.

CORPORATE SOURCE: West. Reg. Res. Cent., U.S. Dep. Agric., Berkeley, CA, 94710, USA
SOURCE: Journal of Plant Growth Regulation (1983), 2(1), 47-57
CODEN: JPGRDI; ISSN: 0721-7595
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB (.+-.)-Dihydrozeatin (I) was synthesized by a Michael condensation of CH2:CMeCO2Me with MeNO2 to give (.+-.)-O2NCH2CH2CHMeCO2Me, which was reduced to (.+-.)-H2NCH2CH2CHMeCH2OH and treated with 6-chloropurine. Hydrolysis of the racemic ester gave (.+-.)-O2NCH2CH2CHMeCO2H, which was resolved by means of (+)- and (-)-.alpha.-methylbenzylamine salts. Conversion of the salts to the corresponding Me esters and subsequent redns. yielded **optically** active H2NCH2CH2CHMeCH2OH. The sp. rotations at 589 nm of (S)-(-)- and (R)-(+)-I derived from **optically** active butanols were appreciably lower than previously reported. The biol. activities of (R)-, (S)-, and (R,S)-I in the betacyanin stimulation assay with Amaranthus parallel the activities found in other cytokinin bioassays.

CC 26-9 (Biomolecules and Their Synthetic Analogs)

IT **64070-19-5P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. and acylation of)

IT **44565-28-8P 88390-32-3P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. and reaction of, with chloropurine)

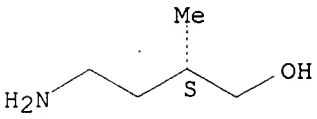
IT **64070-19-5P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. and acylation of)

RN 64070-19-5 HCAPLUS

IT **44565-28-8P 88390-32-3P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. and reaction of, with chloropurine)

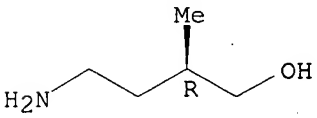
RN 44565-28-8 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

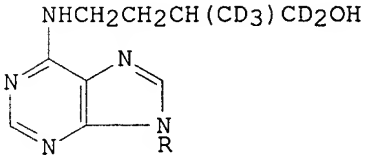


RN 88390-32-3 HCAPLUS
CN 1-Butanol, 4-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1981:103753 HCAPLUS
DOCUMENT NUMBER: 94:103753
TITLE: An efficient synthesis of deuterated (.+-.)-dihydrozeatin-d5 and its riboside
AUTHOR(S): Sugiyama, Tamizi; Tateba, Hideki; Hashizume, Takeshi
CORPORATE SOURCE: Lab. Bioorg. Chem., Tokyo Inst. Agric. Technol., Fuchu, 183, Japan
SOURCE: Agricultural and Biological Chemistry (1980), 44(11), 2755-6
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

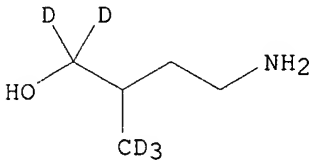


I

AB (.+-.)-H2NCH2CH2CH(CD3)CD2OH, prepd. in 4 steps from .gamma.-butyrolactone, was condensed with 6-chloropurine or 6-chloro-9-.beta.-D-ribofuranosylpurine to give dihydrozeatins I (R = H, ribosyl) with 97.82 and 97.23% deuteration.
CC 33-7 (Carbohydrates)
Section cross-reference(s): 28
IT **76742-83-1P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. and reaction of, chloropurines)
IT **76742-83-1P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP**

(Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, chloropurines)

RN 76742-83-1. HCAPLUS
CN 1-Butan-1,1-d2-ol, 4-amino-2-(methyl-d3)- (9CI) (CA INDEX NAME)



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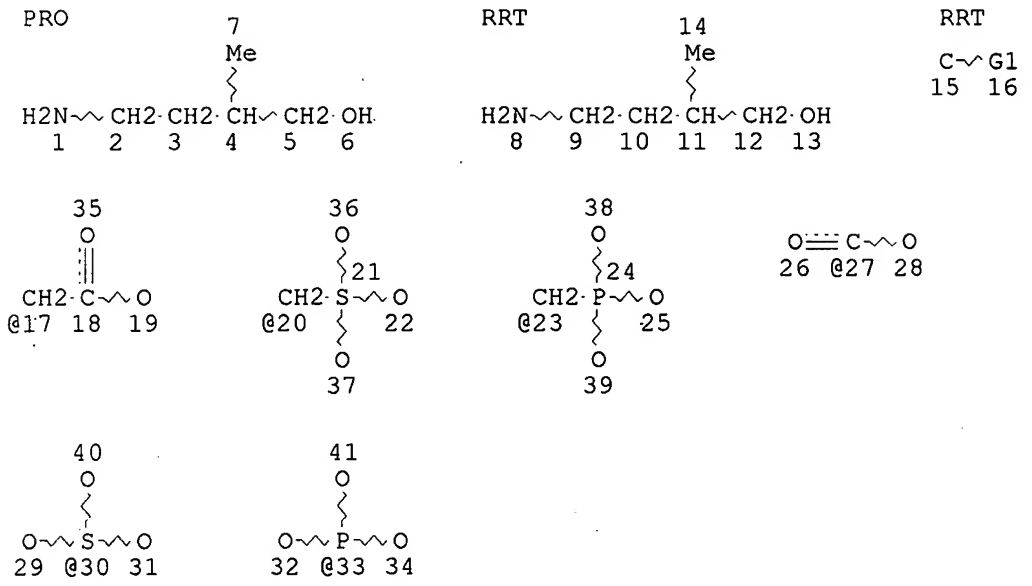


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GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
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